Installation Manual

1966-67 DODGE CHARGER

DOCUMENT #1-1067

Congratulations...

You have just purchased the highest quality, best performing A/C system ever designed for your vehicle.

Congratulations! ! You have just purchased the highest quality, best performing A/C system ever designed for your Classic Car. To obtain the high level of performance and dependability our systems are known for, pay close attention to the following instructions.

Before beginning the installation check the box for the correct components.

Evaporator

Face Duct Assembly

Inlet Air Block Off Assembly

Firewall Block Off Assembly

Flex Hose 2”dia. x 3ft.

Flex Hose 2”dia. x 4ft x 2ea..

Flex Hose 2 ½”dia. x 2 ft.

Sack Kit Louver

Sack Kit Hardware

Sack Kit Control

Glove Box

Check List, Pre-Installation:

- ☐ Before beginning the installation check the shipping box for the correct components. YOUR BOXED UNIT INCLUDES A LIST OF MAJOR COMPONENTS AND A LIST OF BAGGED PARTS. We have a 5 stage check process to make sure you have everything you'll need.
- ☐ **If your vehicle has been or is being modified, some procedures will need to be adjusted to fit your particular application.**
- ☐ A basic cleaning of the engine compartment and interior before beginning will make things go more smoothly.
- ☐ Check condition of engine mounts. Excessive engine movement can damage hoses to A/C and/or heater.
- ☐ Before starting, check vehicle interior electrical functions (interior lights, radio, horn, etc). Make a note of anything that does not work as it's supposed to. During the installation you might find the opportunity to repair or upgrade non-working or out of date components. When you're ready to start the installation, **DISCONNECT THE BATTERY FIRST.**
- ☐ Drain the radiator. Retain the coolant and reuse, or dispose of properly.
- ☐ SAFETY FIRST: Wear eye protection while drilling/cutting, deburr sharp edges, and never get in a hurry or force a part.
- ☐ Tools: Your installation only requires the basic tools everyone has in their garage, nothing exotic or specific to A/C or Heat equipment.

Procedures, During Installation:

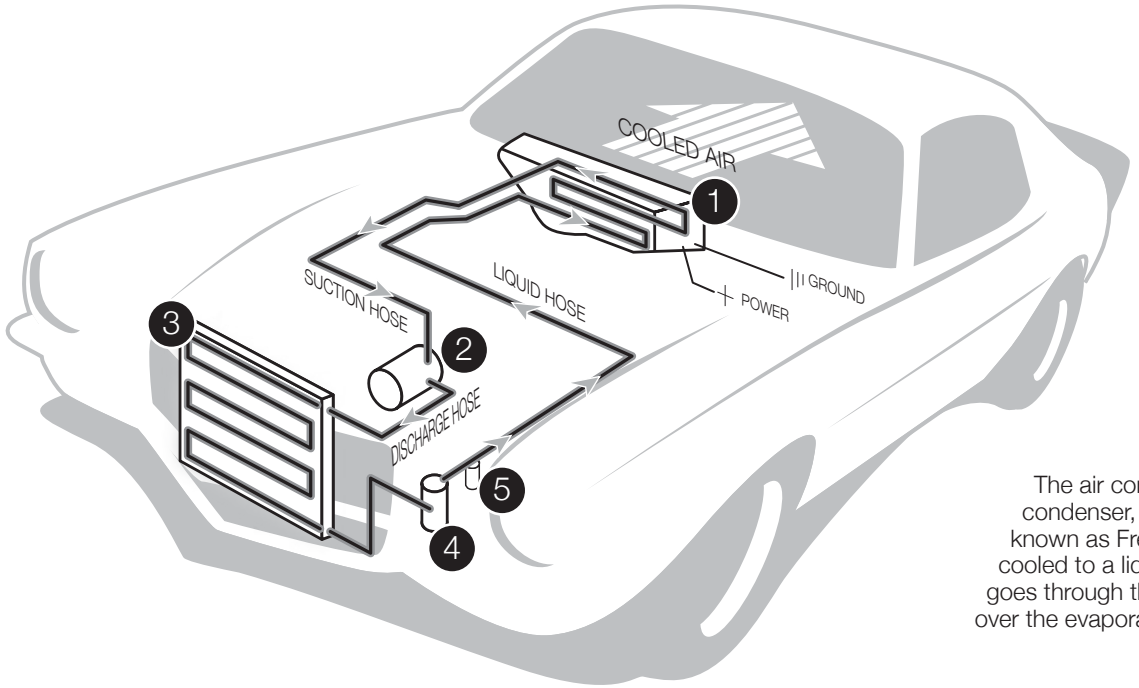
- ☐ Fittings: Use one or two drops of mineral oil (supplied with your kit) on ALL rubber o-rings, threads and where o-rings seat in fittings. Do not use thread tape or sealants.
- ☐ Measure twice (or more), cut once
- ☐ **Should you have any technical questions, or feel you have defective components (or missing items), call us immediately, we will be glad to assist you. Our toll-free number is listed on every page, we're here to help!**

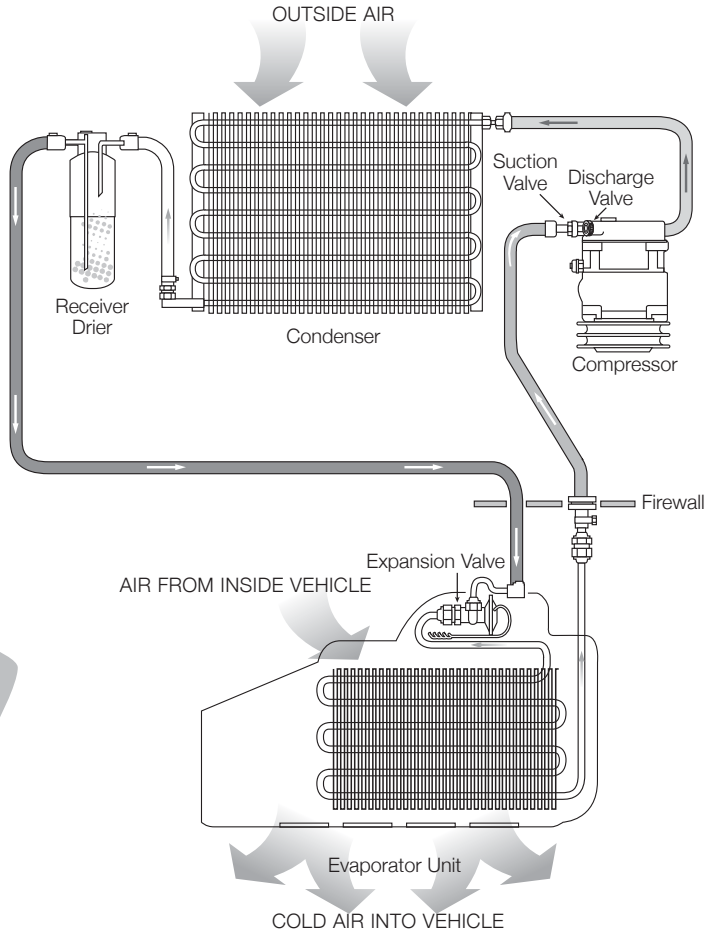
CAUTION: DISCONNECT BATTERY GROUND CABLE

YOU CAN NOW BEGIN THE INSTALLATION...

A Basic Overview of Automotive A/C....

1. **Evaporator with Blower Fan** In order to remove the heat from the air in the vehicle, the A/C evaporator allows the refrigerant to absorb the heat from the air passing over it. The blower fan moves cool air out into the car interior.
2. **Compressor** The compressor pumps and circulates the refrigerant through the system.
3. **Condenser** The condenser is a heat exchanger mounted at the front of the vehicle. Heat drawn out of the interior of the car is expelled here.
4. **Receiver/Drier** The drier not only dries refrigerant, it also filters the refrigerant and stores it under certain operating conditions.
5. **High Pressure Switch** A pressure switch is used to shut down the system if high or low pressure is detected, basically it acts as a safety switch.





The air conditioning system in your car is comprised of a compressor, condenser, expansion valve, receiver/drier, and evaporator. Refrigerant (also known as Freon) is compressed in the compressor. In the condenser, gas is cooled to a liquid state and travels to the expansion valve. As the liquid refrigerant goes through the expansion valve it rapidly cools in the evaporator. A fan blows over the evaporator and cools the air that blows out your vents

“PERFECT FIT SERIES”
IN-DASH
HEAT/ COOL/ DEFROST

CONTROL & OPERATING INSTRUCTIONS

The controls on your new “Perfect Fit” system. Offers complete comfort capabilities in virtually every driving condition. This includes Temperature control in all of the modes.

THE PICTURE YOU SEE SHOWS THE CONTROLS IN THE HEAT MODE. THIS MEANS THAT THE AIR WILL BE DISTRIBUTED THROUGH THE HEATER OUTLETS. THIS ALSO HAS THE TEMPERATURE LEVER IN THE COLDEST POSITION. WITH THE CONTROLS IN THIS POSITION YOU WILL GET THE AIR THROUGH THE HEATER OUTLETS AND THE OUTLET TEMPERATURE AT THE COLDEST POSSIBLE DEGREE.

CAUTION: ALL OF THE OUTSIDE VENTS MUST BE CLOSED WHEN THE SYSTEM IS IN THE A/C MODE. THIS WILL ALLOW THE A/C SYSTEM TO FUCTION AT ITS MAXIMUM PERFORMANCE LEVEL.

THE FOLLOWING SUMMARY WILL DESCRIBE EACH OF THE CONTROL LEVERS FUNCTION.

FAN SPEED SWITCH: There are 3 speeds plus Off. When the switch is in the off position it will disconnect the 12V power to the Blower Motor and the A/C Clutch. This will shut down the entire system. When the switch is moved to any of the blower speeds 1, 2 or 3 there is 12V supplied to the Micro-Switch that is mounted on the Face Duct.

FACE / DEFROST / HEAT DOOR CONTROL: When the Control Knob is pushed all the way to the LEFT the air is distributed to the HEAT outlets. When the knob is pushed to the MIDDLE of the controls the air will go to the DEFROST outlets. In the Defrost position the compressor clutch is engaged for dehumidification. When the knob is pushed all the way to the RIGHT the air will go to the FACE outlets. In the FACE position the compressor is engaged.

TEMPERATURE CONTROL: The Temperature Knob as shown is at the COLDEST temperature position. As the lever is PUSHED to the right the temperature of the discharged air will RISE to the HOTTEST point.

Note: The temperature lever will function in any of the modes.

Removal of the Original Heater Assembly can be accomplished by disconnecting the control cables.

Disconnect cable to the fresh air door.

Remove push / pull assembly that was attached to the fresh air door.

Disconnect control cable from the blend air door.

Disconnect electrical harness from the resistor block. Also disconnect blower motor power wires.

Disconnect Heat / Defrost cable from top of the heater box.

Also remove the defrost flex hose from drivers and passengers defrost outlet.

Discard duct hoses.

Disconnect heater hoses to the heater core.

Locate and remove (2) nuts from the heater box. Discard hardware.

Locate on drivers side of firewall (1) nut that attaches the heater box.

Remove and discard nut.

Remove front support brace from the unit and air box above the heater.

Remove resistor and discard.

Retain hardware and the support brace.

Remove and retain the instrument lights ballast located behind the dash on passenger side. Retain original hardware

Remove Heater Box from behind instrument panel. Set aside.

Locate Heater Controls above the radio. Remove control knobs on the levers.
Remove (3) screws on under side of the instrument bezel.
Remove and retain the hardware.

If vehicle is equipped with factory radio remove and retain all of the hardware.

Remove controls thru back of the instrument panel.

Disconnect electrical harness from the controls.

Remove and discard (2) cables and the blower switch. Do not discard cable clips or the switch mounting screws.

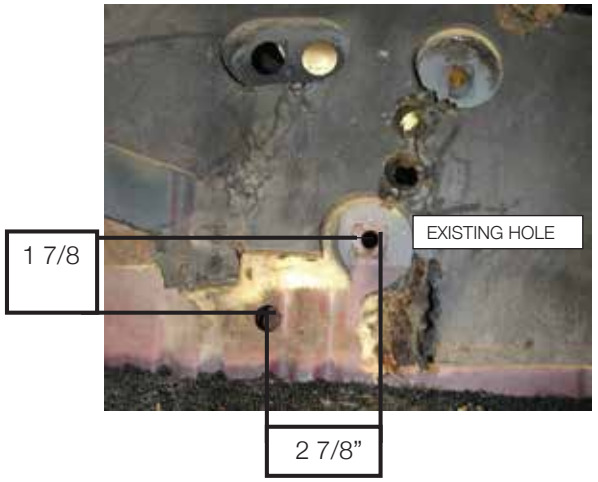
Locate original wire harness that was attached to the blower switch. Cut the connector off. Attach (1) ¼" male spade connector to the BLACK / WHITE wire.

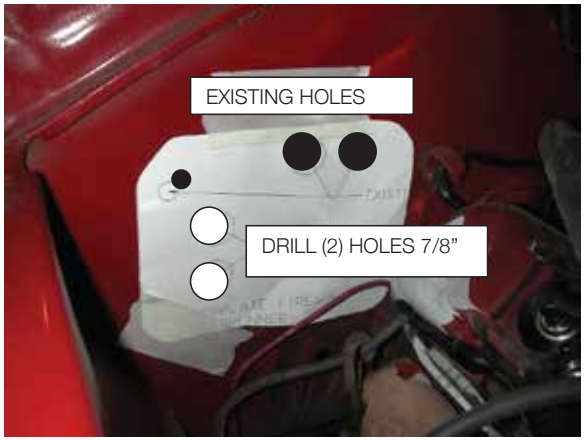
Locate behind dash and on firewall the hole that previously mounted the heater box.
Drill (1) 11/16" dia. hole for the drain tube as shown

Locate the Firewall Hole Template from the install instructions.

Attach template on the firewall and align -three holes to the existing hole.

Drill (2) holes 7/8" dia. as shown.





Locate the Inlet Block off plate and (3) #10 x ¾" tek screws.

Attach block off over the air inlet opening and attach using #10 screws.

Locate the evaporator. Slide the evaporator behind the glove box and up into place.

Insert a/c tubes through the original heater holes and heater tubes through (2) new holes drilled.

Locate in the hardware sack kit (1) ¼ - 20 x 1 bolt and washer.

Attach unit to firewall through the lower original hole that mounted the original heater.

Locate in the hardware sack kit (1) #10 x ¾" tek screw.

Attach support brace on blower to air inlet box using the #10 screw.

Attach face heat / defrost duct assembly to the evaporator as shown.

Use (4) #10 x 5/8” pan head screws. On bottom and top of duct assembly.

Locate original brace and (1) nut and (1) #10 x ¾” tek screw.

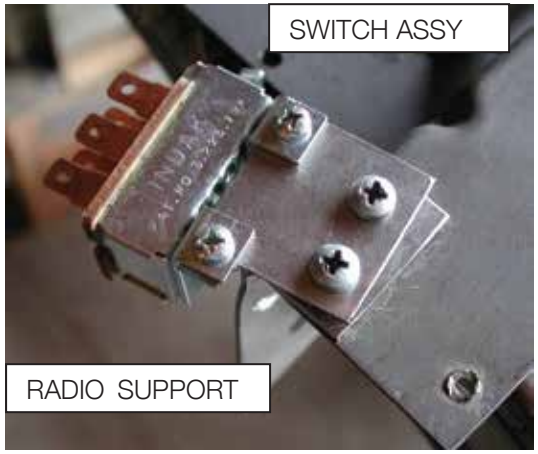
Attach brace to the original stud on vehicle. Carefully adjust bracket to lay flat on the distribution duct. Attach to duct using the #10 screw.

CAUTION: BE SURE THAT THE UNIT IS LEVEL BEFORE ATTACHING BRACE TO DISTRIBUTION DUCT.

Locate the original control assembly.

Carefully cut off radio support leg as shown.

Locate in the control sack kit the blower switch, (2) 3/16” push nut, (2) control cables, original switch mounting screws and cable clips.



Attach blower switch assembly and radio support bracket to original control head using the original hardware.

Attach longest of the cables to temp lever using (1) push nut and the original cable clip. (on bottom)

Attach shortest of the cables to mode control lever using (1) push nut and the original cable clip.

Locate wire harness from the control sack kit.

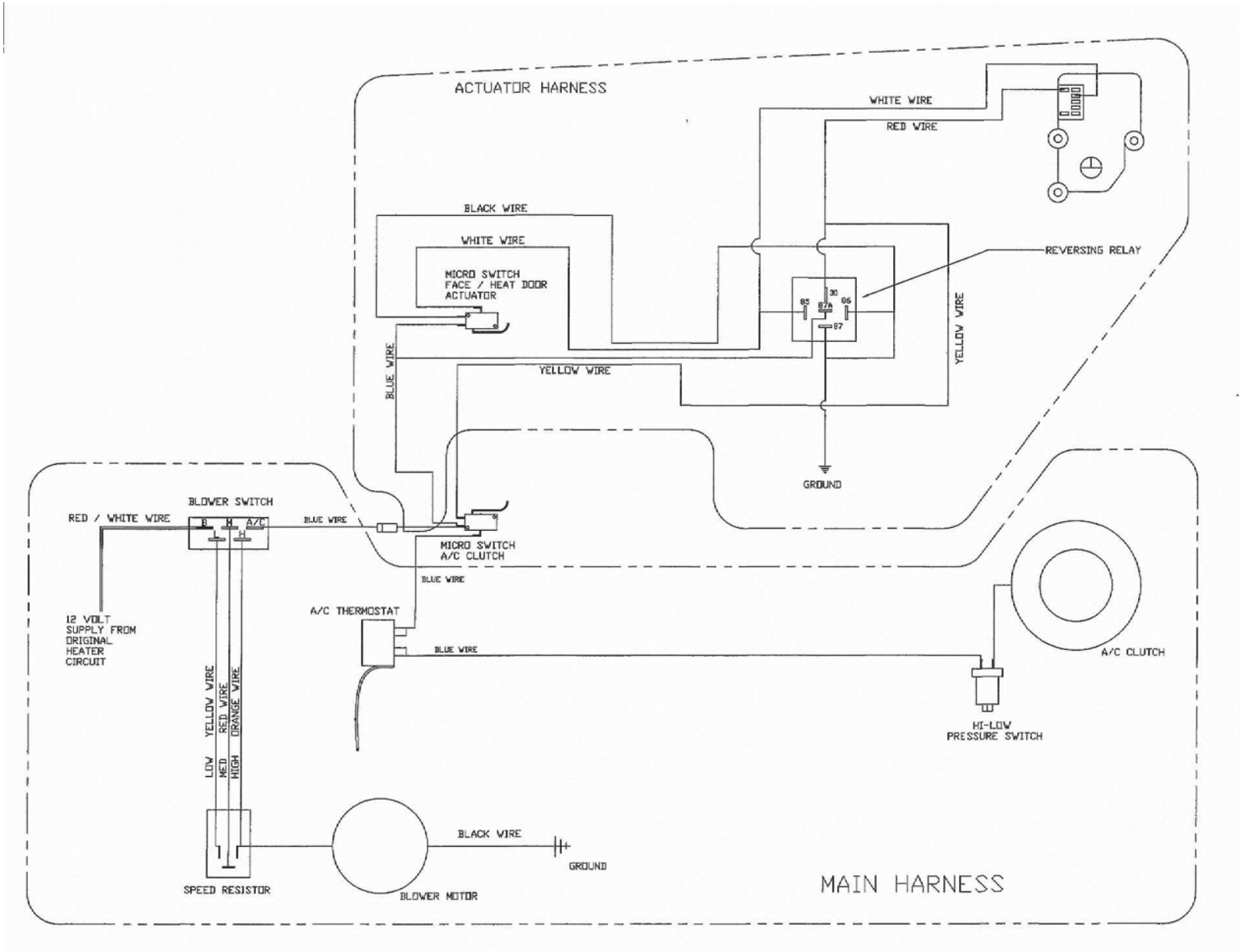
Route main harness across front of unit and to the resistor and blower motor. Route blue clutch wire over evaporator and out through grommet in the firewall. Secure ground from the blower motor using (1) #10 x ¾ “hex head Tek screw.

Attach harness to the blower switch according to wiring diagram on the next page.

Attach micro switch wires from main harness to the switch on side of the face / head duct.

REFER TO THE WIRING DRAWING FOR PROPER CONNECTIONS.

Reinstall the control head using original hardware.


ACTUATOR HARNESS
WHITE WIRE
RED WIRE
BLACK WIRE
WHITE WIRE
MICRO SWITCH
FACE / HEAT DOOR
ACTUATOR
REVERSING RELAY
85
30
87A
86
87
YELLOW WIRE
BLUE WIRE
YELLOW WIRE
GROUND
BLOWER SWITCH
RED / WHITE WIRE
B
M
A/C
L
H
BLUE WIRE
MICRO SWITCH
A/C CLUTCH
BLUE WIRE
12 VOLT
SUPPLY FROM
ORIGINAL
HEATER
CIRCUIT
A/C THERMOSTAT
BLUE WIRE
A/C CLUTCH
HI-LOW
PRESSURE SWITCH
LOW YELLOW WIRE
MED RED WIRE
HIGH ORANGE WIRE
BLACK WIRE
GROUND
SPEED RESISTOR
BLOWER MOTOR
MAIN HARNESS

Locate in the hardware sack kit (2) defrost hose adapters. Locate 2” dia flex hose (1) piece 12” long and (1) piece 24” long cut to 18”.

Attach hose to the adapters using (2) #8 pan head screws provided.

Attach assembly with the 12” hose to rear outlet on defrost duct, around unit brace and push on to passengers defrost outlet on the dash.

Attach assembly with the 18” hose to front outlet on defrost duct and over to the drivers defrost outlet.

Locate the mode control cable and (1) #8 x 3/8 pan head screw.

Insert cable into 2ND hole from the pivot of the crank arm.

Attach cable flag to bracket using the #8 screw.

Route Temp Cable over top of the evaporator and out through hole along with the clutch wire.

Locate in the hardware sack kit the (4) remote louver assemblies, and the #10 x ¾” hex head tek screws.

Mount the (2) remote louver assemblies with 2.5” dia flex hose desired location of center dash.

Mount the (2) remote louver assemblies with 2” dia flex hose desired location of Driver side and Passenger side of dash.

Attach bezel assembly over the hose adapter and fasten with (2) #8 screws on the bottom. Install instrument light ballast controller next to the center louver assembly.

Note: extend hookup wires as needed.

Caution: Carefully check under the Instrument Panel for all cables, electrical harness, or Flex Hoses that might interfere with safe operation of the vehicle.

Installation of the interior components is complete. We will now install the under hood portion of the unit.

INSTALL THE COMPRESSOR ADAPTER KIT AND COMPRESSOR AT THIS TIME PER THE MANUFACTURERS DIRECTIONS.

Locate in the hardware sack kit the 5/8” hose nipple.

Remove and discard ½” nipple from the engine.

Using a small amount of pipe sealer attach 5/8” nipple to the engine.

Locate the Water Valve and (3) worm gear clamps.

Supply line from engine is attached to the LOWER heater hookup tube. Cut 6” off end of the RETURN LINE and install water valve using (3) worm gear clamps as shown above.
Attach other end of return line to the pipe nipple previously installed.

Attach temperature control cable to the water valve. Adjust valve to the off position and set control lever in the cold position.

Note: It is recommended that you replace heater hoses from the engine to the hookup tubes.

Locate the Condenser, (1) Right top condenser mounting bracket, (1) Left top condenser mounting bracket and (4) #10 x 3/8” hex head screws. Attach brackets to the condenser as shown.

Remove top radiator mounting bolts and retain. Loosen the lower mounting bolts.

Slide condenser into position.

Push radiator back toward the engine.

Top brackets line up to the upper radiator mounting bolts. Between radiator and the radiator support.

Reinstall the radiator mounting bolts.

Locate under front of the vehicle the air damn. Remove and retain the damn and its mounting hardware.

Locate the left lower condenser mounting bracket, (1) ¼”-20 x 5/8” bolt, ¼”-20 flange nut and (2) #10 x 3/8” hex head screws.

Install the bracket as shown.

Locate the right lower condenser mounting bracket, (1) ¼”-20 x 5/8” bolt, ¼”-20 flange nut and (2) #10 x 3/8” hex head screws.

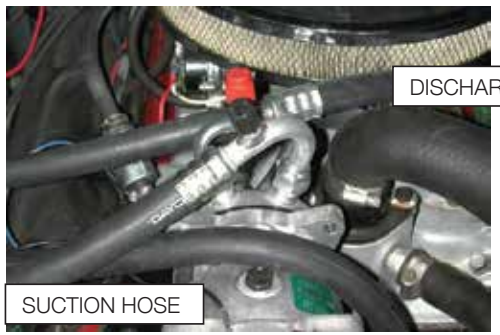
Install the bracket as shown.

Locate the Liquid Tube and (1) #6 o-ring. Attach tube to #6 fitting on the condenser.

Reinstall the lower air damn using original hardware.







Route liquid tube in front of the condenser.

Locate (1) 3/8” hose clamp and (1) #10 x 3/8” hex head screw.

Locate the #8 discharge tube, and (1) #8 o-ring.

Attach to upper condenser fitting using (1) #8 o-ring and a few drops of mineral oil.

Locate (1) #8 hose clamp, and (1) #10 tek screws.

Attach discharge tube to fitting next to battery as shown. Use a #8 o-ring and a few drops of mineral oil.

Other end with server port attaches to the compressor using (1) #8 o-ring and a few drops of mineral oil.

Locate the suction hose and (2) #10 o-rings. Attach end with the service port to compressor and other end to fitting at the firewall. Use (1) #10 o-ring on each fitting and a few drops of mineral oil.

Locate short Liquid Tube, (2) #6 o-rings, Receiver Drier, Hi/Low Pressure switch and (3) ¼" – 20 x 1" screws and nuts.

Attach pressure switch to the liquid tube using a few drops of mineral oil.

Attach tube to fitting from the unit using (1) #6 o-ring and a few drops of mineral oil.

Using the tube as a locating device. Mark and drill 1/4" dia. hole (3) places for the drier.

Attach drier using the #10 screws and nuts. Hookup liquid tube to the drier using (1)
#6 o-ring and a few drops of mineral oil.

Locate Pressure Switch harness. Attach to switch on the liquid tube. Locate in the hardware sack kit the refrigerant tape. Seal around the tubes at the firewall.

Locate the Liquid Hose and (2) #6 o-rings. Use (1) #6 o-ring and a few drops of mineral oil. Attach one end to the drier using (1) #6 o-ring and a few drops of mineral oil.

Other end routes around washer bottle and attaches to liquid tube from the condenser. Use (1) #6 o-ring and a few drops of mineral oil.

Locate (2) white wires from the pressure switch. Route (1) of the white wires along with #10 refrigerant hose. Attach to the compressor clutch.

The other white wire attaches to Blue Clutch wire from the thermostat.

Reconnect the battery.

**THE ENGINE COMPARTMENT OF YOUR SYSTEM IS COMPLETE.
THE UNIT IS READY FOR EVACUATION AND CHARGING.**

THIS SHOULD BE DONE BY A QUALIFIED AND CERTIFIED AIR CONDITIONING TECHNICIAN.

NOTE: COMPRESSOR IS SUPPLIED WITH THE CORRECT OIL CHARGE. DO NOT ADD OIL TO SYSTEM.

134a SYSTEMS 24 oz OF REFRIGERANT
Recommend that power fuse is 25amp minimum

Congratulations you have completed the install of your CLASSIC AUTO AIR “Perfect Fit Series” system.

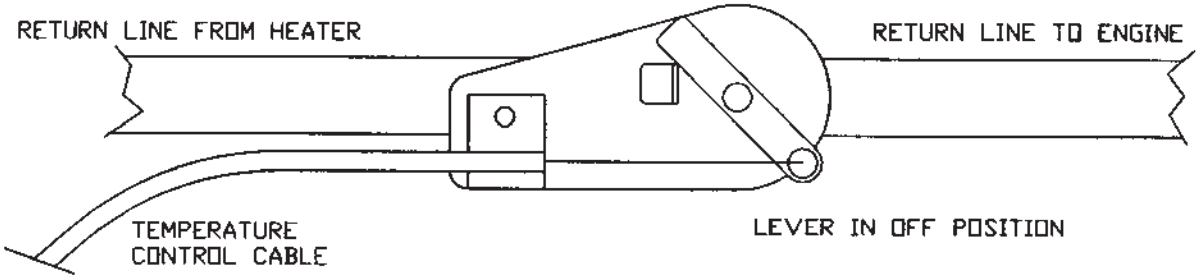
IMPORTANT!

CAUTION: WATER VALVE MUST BE INSTALLED PER THE INSTRUCTIONS.

This data sheet covers the proper instalation of the “Temperature Control Water Valve” that is supplied in your Air Condioning , Heating, and Defrost unit. Classic Auto Air has done extensive testing on the correct method to install the water valve in order to get a repeatable and progressive temperature control.

It is necessary to locate the “Supply Line” from the engine on the vehicle and route a hose directly to the heater connection.
NOTE: The supply line will be coming from the engine block after the water has passed through and absorbed heat from the engine. Typically it is located next to the return radiator hose from the engine to the top of the radiator.

Locate the “Return Line” from the heater connection. Cut 6” of 5/8” dia. heater hose and attach it to the inlet side of the water valve. Attach this assembly to the return heater connection. Attach a heater hose from the outlet side of the water valve and route to the return connection on engine. NOTE: The return connection is typically located on the water pump.



TDS-001 WATERVALVE

CAUTION: WATER VALVE MUST BE INSTALLED ON HEATER LINE ROUTED TO WATER PUMP.

NOTE: COMPRESSOR PURCHASED WITH KIT IS SUPPLIED WITH THE CORRECT OIL CHARGE. DO NOT ADD OIL TO SYSTEM.
134A SYSTEMS 24 oz OF REFRIGERANT
Recommend that power fuse is 25amp minimum

New A/C System Preparation... A MUST READ!

Please read through these procedures before completing this new A/C system charging operation.
A licensed A/C technician should be utilized for these procedures to insure that your new system will perform at it's peak, and that your compressor will not be damaged.

1) Your radiator/cooling system is an integral part of your new system. Please insure that you have a 50/50 mix of distilled water and antifreeze. The heater coil **MUST** be purged (cycle heater control valve) to make sure no water, without antifreeze, is in the heater coil before you charge the A/C system.
2) Evacuate the system for 45 minutes (minimum).
3) **Your new compressor MUST be hand-turned 15-20 revolutions before and after charging with liquid. Failure to do this may cause the reed valves to become damaged** (this damage is NOT covered by your warranty).
4) Your new system requires 134a refrigerant. It will require 1.5 lbs (or 24 oz).
5) Your new compressor comes charged with oil - NO additional oil is needed.
6) Insure that the new belt is tight.
7) **DO NOT CHARGE SYSTEM WITH LIQUID REFRIGERANT!**

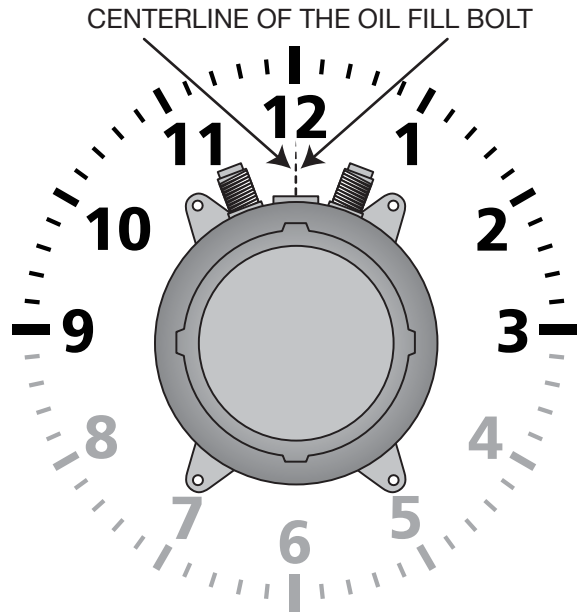
RECOMMENDED TEST CONDITIONS: (After system has been fully charged and tested for basic operation)

- Determine the temperature outside of the car
- Connect gauges or service equipment to high/low charging ports
- Place blower fan switch on medium
- Close all doors and windows on vehicle
- Place shop fan directly in front of condenser
- Run engine idle up to approx. 1500 rpm

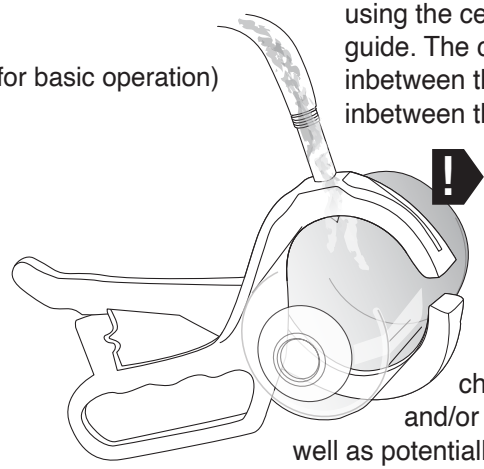
ACCEPTABLE OPERATING PRESSURE RANGES:

1. HIGH-SIDE PRESSURES (150-275 PSI)
2. LOW-SIDE PRESSURES (10-25 PSI in a steady state)

Readings above are based on an ambient temperature of 90° with an adequate airflow on condenser



CAUTION! When mounting your compressor and/or adjusting the belt use caution. Mount by using the centerline of the oil fill plug as your guide. The compressor can ONLY be mounted inbetween the 9 to 3 positions. DO NOT mount inbetween the 4 to 8 positions.



Do NOT tilt, shake or turn refrigerant can upside-down OR use a charging station to install refrigerant while the engine is running. Doing so will direct liquid refrigerant into the compressor piston chamber, causing damage to reed valves and/or pistons and/or other components, as well as potentially seizing the compressor. Allow a minimum of 30 minutes for liquid to "boil off." You must hand turn the compressor hub (not the pulley) a minimum of 15 complete revolutions prior to starting the engine with the clutch engaged.

TROUBLESHOOTING GUIDE

TEST CONDITIONS USED TO DETERMINE SYSTEM OPERATION

(THESE TEST CONDITIONS WILL SIMULATE THE AFFECT OF DRIVING THE VEHICLE AND GIVE THE TECHNICIAN THE THREE CRITICAL READINGS THAT THEY WILL NEED TO DIAGNOSE ANY POTENTIAL PROBLEMS).

B. CONNECT GAUGES OR SERVICE EQUIPMENT TO HIGH/LOW CHARGING PORTS.

C. PLACE BLOWER FAN SWITCH ON MEDIUM.

D. CLOSE ALL DOORS AND WINDOWS ON VEHICLE.

E. PLACE SHOP FAN IN FRONT OF CONDENSER.

F. RUN ENGINE IDLE UP TO 1500 RPM.

ACCEPTABLE OPERATING PRESSURE RANGES (R134A TYPE)

1. HIGH-SIDE PRESSURES (150-275 PSI) **Note- general rule of thumb is two times the ambient (daytime) temperature, plus 15-20%.*
2. LOW-SIDE PRESSURES (10-25 PSI in a steady state).

CHARGE AS FOLLOWS: R134A = 24 OZ.
NO ADDITIONAL OIL IS NECESSARY IN OUR NEW COMPRESSORS.

TYPICAL PROBLEMS ENCOUNTERED IN CHARGING SYSTEMS

NOISY COMPRESSOR. A noisy compressor is generally caused by charging a compressor with liquid or overcharging

A. If the system is overcharged both gauges will read abnormally high readings. This is causing a feedback pressure on the compressor causing it to rattle or shake from the increased cylinder head pressures. System must be evacuated and re-charged to exact weight specifications.

B. Heater control valve installation - Installing the heater control valve in the incorrect hose. Usually when this occurs the system will cool at idle then start to warm up when raising the RPM's of the motor. THE HEATER CONTROL IS A DIRECTIONAL VALVE; MAKE SURE THE WATER FLOW IS WITH THE DIRECTION OF THE ARROW. As the engine heats up that water transfers the heat to the coil, thus overpowering the a/c coil. A leaking or faulty valve will have a more pronounced affect on the unit's cooling ability. Installing the valve improperly (such as having the flow reversed) will also allow water to flow through, thus inhibiting cooling. Check for heat transfer by disconnecting hoses from the system completely. By running down the road with the hoses looped backed through the motor, you eliminate the possibility of heat transfer to the unit.

C. Evaporator freezing - Freezing can occur both externally and internally on an evaporator core. External freeze up occurs when the coil cannot effectively displace the condensation on the outside fins and the water forms ice (the evaporator core resembles a block of solid ice), it restricts the flow of air that can pass through it, which gives the illusion of the air not functioning. The common cause of external freezing is the setting of the thermostat and the presence of high humidity in the passenger compartment. All door and window seals should be checked in the event of constant freeze-up. A thermostat is provided with all units to control the cycling of the compressor.

D. Internal freeze up occurs when there is too much moisture inside the system. The symptoms of internal freeze up often surface after extended highway driving. The volume of air stays constant, but the temperature of the air gradually rises. When this freezing occurs the low side pressure will drop, eventually going into a vacuum. At this point, the system should be checked by a professional who will evacuate the system and the drier will have to be changed.

E. Inadequate airflow to condenser - The condenser works best in front of the radiator with a large supply of fresh air. Abnormally high pressures will result from improper airflow. Check the airflow requirements by placing a large capacity fan in front of the condenser and running cool water over the surface. If the pressures drop significantly, this will indicate the need for better airflow.

F. Incorrect or inadequate condenser capacity - Incorrect condenser capacity will cause abnormally high head pressures. A quick test that can be performed is to run cool water over the condenser while the system is operating, if the pressures decrease significantly, it is likely a airflow or capacity problem.

G. Expansion valve failure - An expansion valve failure is generally caused by dirt or debris entering the system during assembly. If an expansion valve fails it will be indicated by abnormal gauge readings. A valve that is blocked will be indicated by high side that is unusually high, while the low side will be unusually low or may even go into a vacuum. A valve that is stuck open will be indicated by both the high and low pressures rising to unusually high readings, seeming to move toward equal readings on the gauges.

H. Restrictions in system - A restriction in the cooling system will cause abnormal readings on the gauges. A high-side restriction (between the compressor and the drier inlet) will be indicated by the discharge gauges reading excessively high. These simple tests can be performed by a local shop and can help determine the extent of the systems problem.

Trouble Shooting Your Classic Auto Air A/C System

PROBLEM: system is not cooling properly
ISSUE: cold at idle, warmer when raising engine RPM's

Make sure the Water Valve is positioned correctly

The water valve is a directional valve and should be installed with the arrow pointing towards the water pump, it should be connected to the heater hose that runs from the heater core to the water pump. If the water valve is connected to the incorrect hose it allows water to circulate through the system via the heater core over powering the cooling effect of the A/C coil, (normally the air conditioning is functioning properly).

Step 1: Check placement of the water valve, correct if needed. (In some cases changing the location of the water valve may not fix the above problem.) Continue to next step.

Step 2 If changing the location of the water valve does not rectify the issue, then possibly the water valve is permanently damaged and may need to be replaced. To check the integrity of the water valve completely remove the water hoses for the heater core and "loop" together. (This will remove the heater system completely from the possibilities) If the system now cools, replace the water valve

Verify Adequate Air Flow to Condenser

For an air conditioning system to function properly there has to be adequate airflow across the condenser. The function of the condenser is to dissipate heat, without proper airflow your system will not cool correctly in the cabin of your vehicle.

Step 1: connect gauges to a/C hoses. The pressures should be: with the ambient temp is 90, low side pressures should be between 10-25 psi, high side pressures should be between 150-275 psi

Step 2: IF the low side pressures are normal and the high side pressures are high then there might be an airflow issue, continue to next step.

To test air flow to Condenser do the following three tests:

1. Place a piece of paper on the condenser with the car in idle and see if paper is held in place.
2. With car in idle, attach gages, and place a large capacity fan in front of the condenser. What happens to the pressures?
3. With car still in idle and gages attached, pour water down the front of the condenser. What happens to the pressures?

If the paper is held in place you are at least getting some air flow. If the high side decreases during test 2 & 3 then your condenser is not getting enough air which is causing your system to not cool properly. To correct this issue you will need a more powerful mechanical fan.

Step 3: Confirm correct Refrigerant charge in System

All of our systems should be charged with 24 oz or 1.5 lbs of R134A Refrigerant only. If overcharged you will need to evacuate the system and recharge with the correct amount.*

What measurements mean:

Low Temp and High Pressure seem to be equal...

You have a malfunctioning expansion valve that is stuck open.

High Side is extremely high and Low Side is extremely low (possibly into vacuum)...

There is a blockage in the system. Remove hoses and blow compressed air through in both directions. If pressures don't change its possible that your expansion valve is stuck closed and would have to be replaced.

*Compressor Concerns:

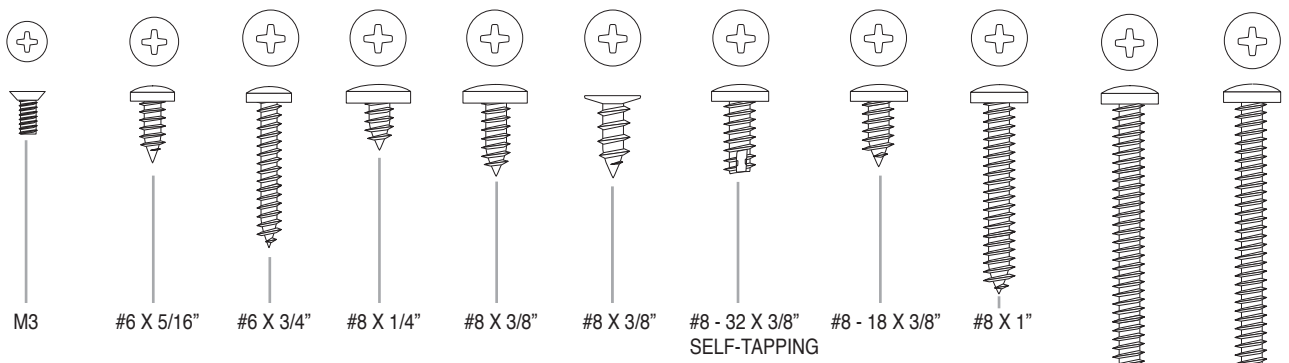
This is often misdiagnosed as a problem for the system not cooling properly. If you have a noisy compressor it is due to improper charging of refrigerant. An overcharged (more than 24 oz or 1.5 lbs R134A) compressor can cause rattling. If charged with pure liquid there is a high probability you have bent reed valves that are causing tapping sound.

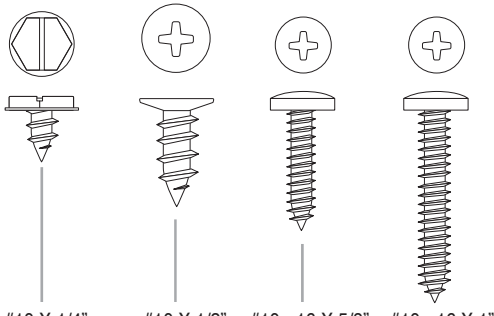
SCAN QR code
with your mobile camera

Get the technical support you want the moment you need it, with no wait times. Simply **SCAN** the **QR code** and be directly taken to our support section to troubleshoot all things A/C.

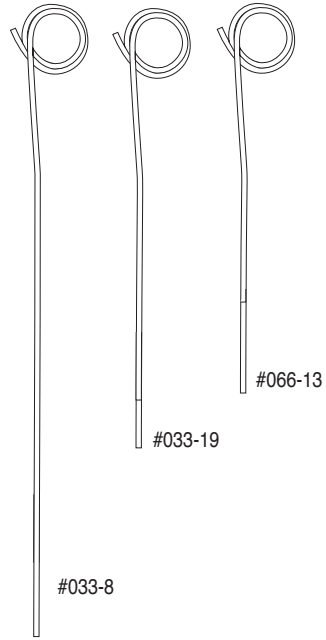
Classic Auto Air Hardware Reference Guide

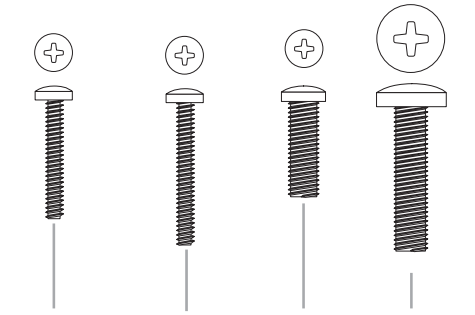
This is our basic line-up of hardware. No single kit will not contain all of these, but you can use this guide to match-up hardware for shape and size (all of these are actual size.)

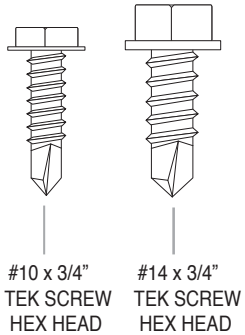


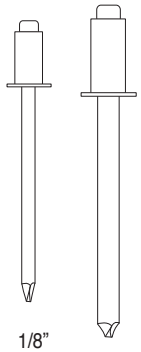


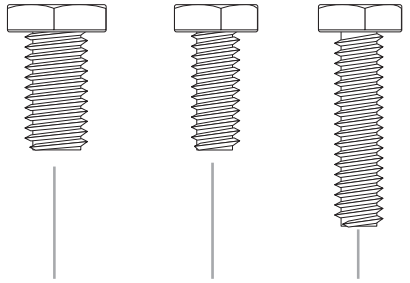
CONNECTING WIRE







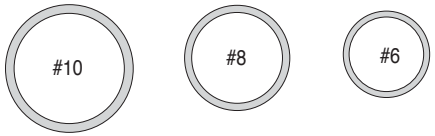


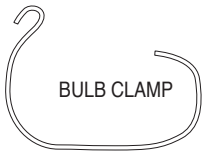


LOCK NUTS

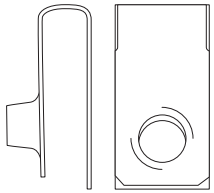
NUTS AND WASHERS

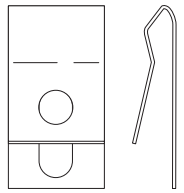
ORINGS

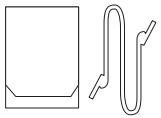


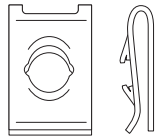


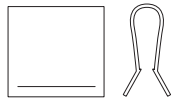
CLIPS



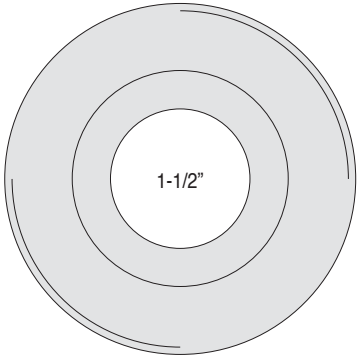


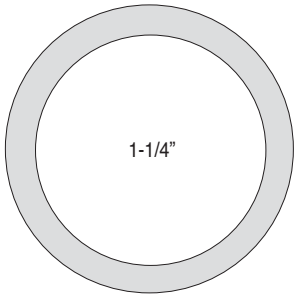


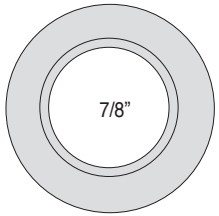




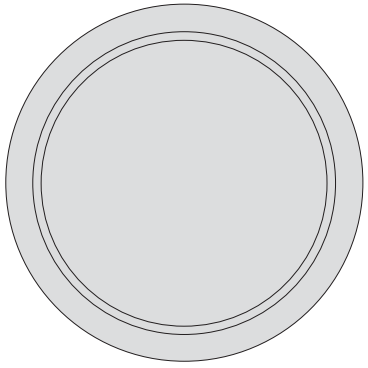
GROMMETS

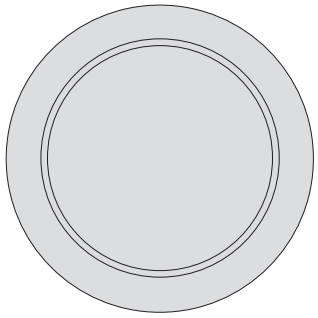


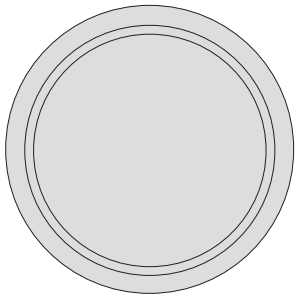


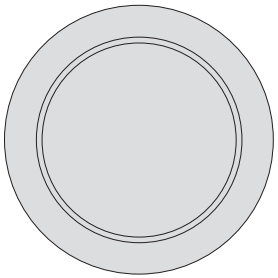


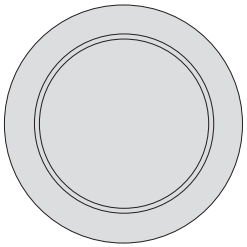
HOLE PLUGS

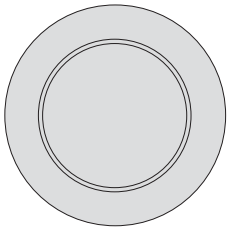


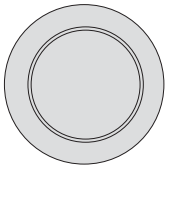




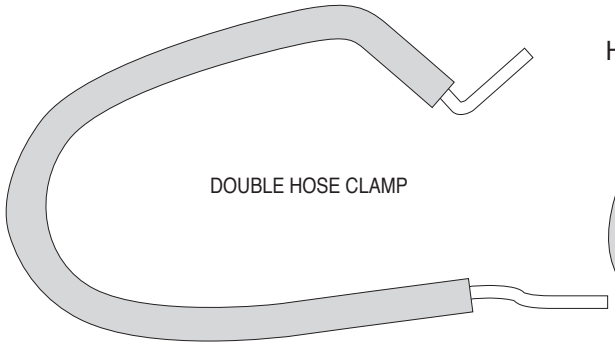


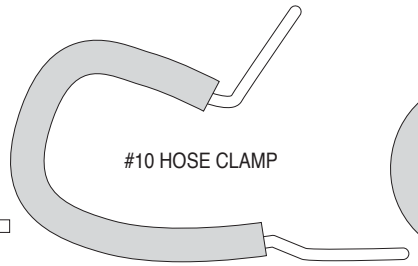


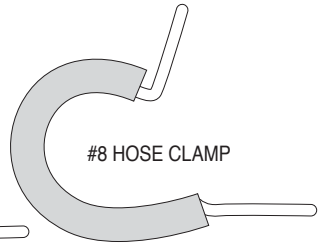


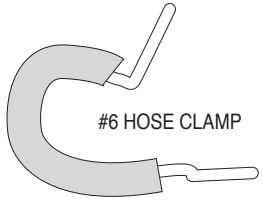


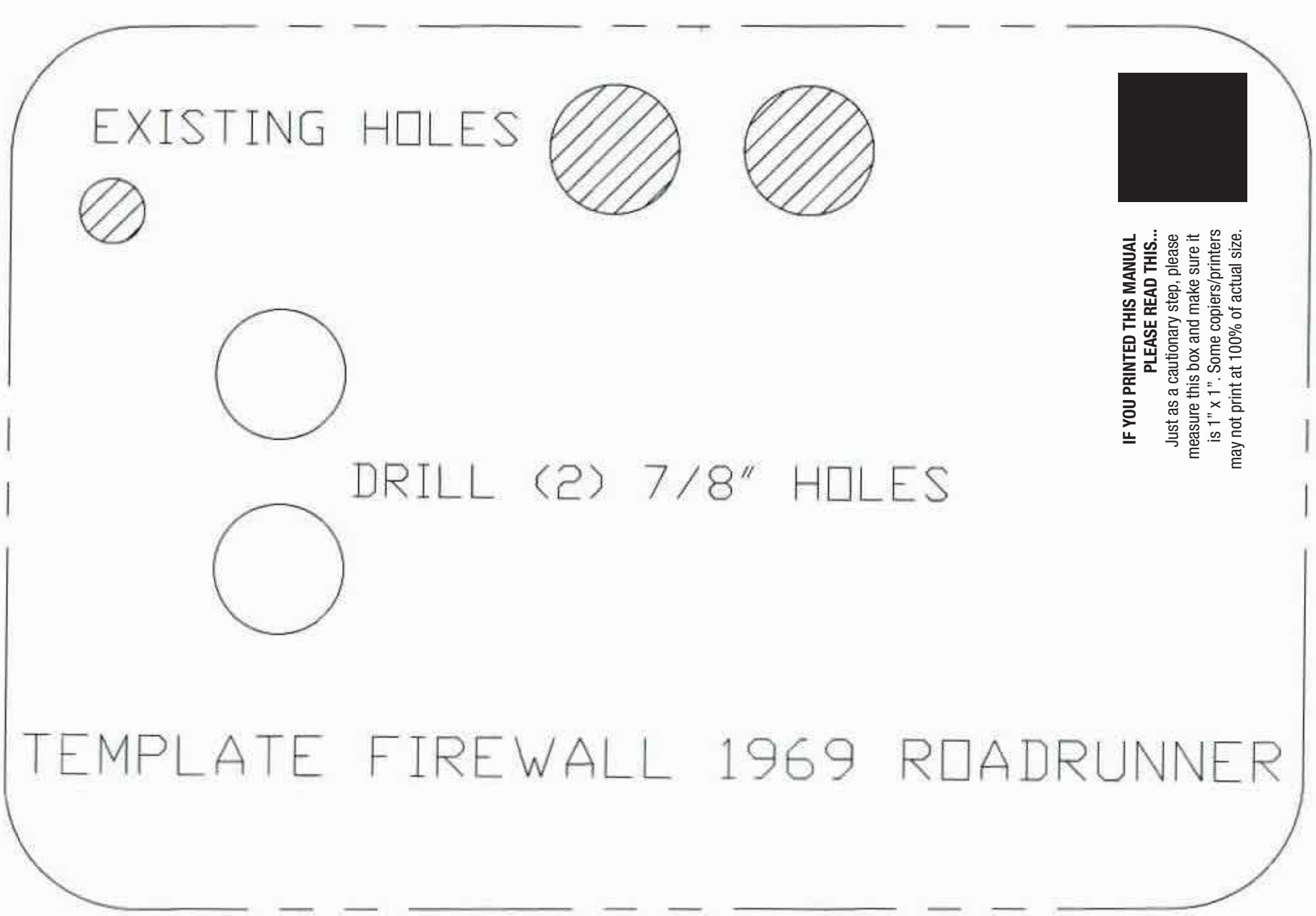
HOSE CLAMPS











IF YOU PRINTED THIS MANUAL PLEASE READ THIS...

Just as a cautionary step, please measure this box and make sure it is 1" x 1". Some copiers/printers may not print at 100% of actual size.